

### REMARKS

Claims 1-26 are pending and stand rejected. Claims 1, 4, 10, 13, 14, 17, 23 and 26 have been amended herein. No new matter has been added by these amendments. After the entry of the amendments submitted herein, claims 1-26 remain pending.

#### I. Claim Objections

The Examiner objects to claims 6 and 19 because they recite "using a salicide process that uses a metal selected from the group including cobalt, **nickel, and titanium**" when the use of nickel and titanium are not described in the specification.

In response, the specification has been amended to recite the use of nickel and titanium in the salicide process. The paragraph beginning on page 10, line 6 of the originally filed specification has been amended to recite "[t]he SALICIDE is formed by depositing a metal, such as cobalt (Co), nickel (Ni), and titanium (Ti), on the exposed polysilicon gate electrodes 14 . . . ." This amendment does not introduce new matter to the disclosure because the recitation of nickel and titanium in the originally filed claims 6 and 19 are part of the original disclosure.

The Examiner objects to claims 8 and 9 because they recite "etcher and result in an aspect ratio of said gaps of **about 1.4**." The Examiner also objects to claims 10 and 23 because they recite "to provide an aspect ratio of said gaps of **between about 1.4 and 6.0**." The Examiner noted that these recited figures are not described in the specification.

In response, the paragraph that begins on page 10, line 22 of the specification has been amended to recite "the aspect ratio can be reduced from 5.0 to less than 1.5 or about 1.4."

Furthermore, claims 10 and 23 have been amended to recite "to provide an aspect ratio of said gaps of less than 1.5." These amendments do not add new matter because the recitation of aspect ratio of gaps of about 1.4 in the originally filed claims 8 and 9 are part of the original disclosure.

The Examiner also objects to claims 7 and 20 because the recitation of "a thickness of between about 250 and 400 Angstroms" recited in these claims are not described in the specification.

In response, the paragraph that begins on page 10, line 6 of the specification has been amended to now recite "[t]he SALICIDE layer is formed to a thickness of between about 250 and 400 Angstroms." This amendment does not add new matter because the recitation of this information in originally filed claims 7 and 20 are part of the original disclosure.

In view of the foregoing amendments to the specification, Applicant believes that all objections to claims 6, 7, 8, 9, 10, 19, 20, and 23 have been addressed and these claims are fully supported by the specification, as amended.

## II. Claim Rejections

Claims 1-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over the material disclosed in the Background of Invention ("BOI") in view of U.S. Patent No. 6,252,277 to Chan *et al.* ("Chan"). This basis for rejection is traversed, because there is no proper motivation or nexus for Examiner's suggested combination of the references.

Referring to independent claims 1 and 14, the Examiner states that BOI does not teach all of the steps recited in these claims. The Examiner, however, alleges that the missing steps of "removing said sidewall spacers 35; forming said ILD layer 50 over and between said gate electrodes 44 and filling gaps 49 between said gate electrodes on said substrate 30" are disclosed in Chan and states that the BOI in view of Chan obviates the claimed invention.

To properly combine multiple references under 35 U.S.C. §103(a), there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine teachings of the references. *See In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). In this case, the Examiner failed to state any such suggestion or motivation to properly combine the two references, BOI and Chan.

Specifically, the two cited references do not state, either expressly or impliedly, any suggestion or motivation to apply the removing of the spacers (35) disclosed in Chan reference to the method disclosed in BOI to arrive at the invention claimed in claims 1 and 14. In the claimed invention, the sidewall spacers are removed before forming the interlevel dielectric layer in order to solve the problems associated with the narrow width of the gap between the closely spaced gate electrodes. Chan reference, however, does not disclose any reason for removing the

spacers (35). There is no showing of motivation or nexus that would suggest that the step of removing the spacer (35) disclosed in the Chan reference would solve the problem associated with the method disclosed in BOI.

Furthermore, in reviewing the structure of the FET device of Chan illustrated in Figures 4J-4K, cited by the Examiner, it is clear that the removal of the spacer (35) does not achieve the same result as in the invention claimed in claims 1 and 14. The spacer (35) of Chan is between the gate electrode (46) and the source/drain structures (39). The removal of the spacer (35) in Chan does not reduce the aspect ratio of the gap between two gate electrodes as in the invention claimed in claims 1 and 14. There is no express or implied suggestion or motivation shown in either of the references to combine the teachings of Chan and BOI. And the Examiner has not cited any showing of such motivation to combine the two references. Therefore, the disclosure of the BOI and the Chan reference may not be properly combined and they do not teach or suggest the invention claimed in claims 1 and 14.

Accordingly, withdrawal of the rejection and allowance of claims 1 and 14 are respectfully requested.

Claims 2-13 and 15-26 depend from independent claims 1 and 14, respectively, which are allowable over the cited references. Thus, withdrawal of the rejections and allowance of claims 2-13 and 15-26 are respectfully requested.

**III. Additional Claim Amendments**

Claims 1 and 14 have been amended to correct a grammatical error. Namely, an "and" has been added between the recitations of the last two claim limitations.

Claims 4 and 17 have been amended to delete the unnecessary recitation "and resulting in an aspect ratio of said gaps between said gate electrodes of at least 6.0."

Claims 10 and 23 have been amended to correct the recitation of the aspect ratio of the gaps between the gate electrodes as being "less than 1.5" according to the disclosure of the originally-filed specification. The support for this amendment can be found, for example, at the paragraph beginning on page 10, line 22 of the originally-filed specification and no new matter has been added by these amendments.

Claims 13 and 26 have been amended to recite that the interlevel dielectric layer has a dielectric constant of less than 4.0. The support for this amendment can be found, for example, on page 2, lines 8-11 of the originally-filed specification and no new matter has been added by these amendments.

**IV. Conclusion**

Applicant believes that all outstanding issues have been addressed herein and the pending claims 1-26 are in condition for allowance.

No fee is believed required for submission of this communication. The Commissioner is hereby authorized to charge any additional fees required associated with this communication to Duane Morris LLP Deposit Account No. 50-2061.

Respectfully submitted,



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